







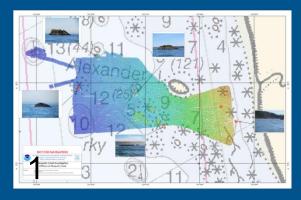
## 1. Mosquito Creek

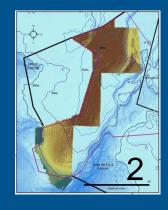
## 2. The Prairie

### 3. Cape Alava

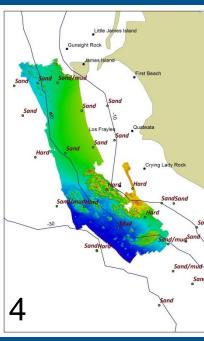
4. Quillayute Needles

### Seafloor Mapping











### Oceanography

- 10 Research Moorings Deployed
- UW/APL thermistors added

- Hypoxia detected in late July in southern portion of OCNMS
  - 49 profiles taken

### Wildlife Research

# Unmanned Aircraft for Surveying Seabird Colonies



**PUMA** 



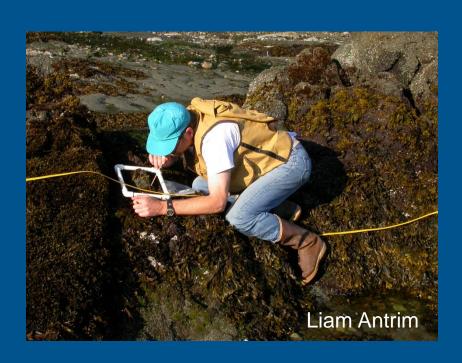
Quadrocopter

### Coastal Habitats



### **Coastal Habitats**

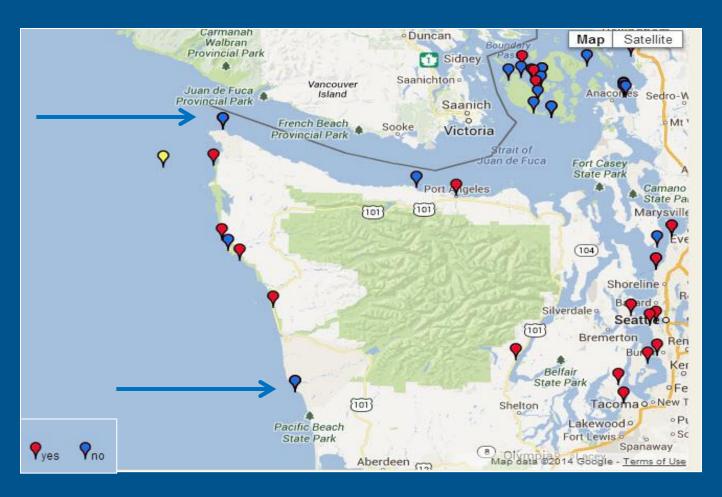
### Intertidal Monitoring – MARINe & ONP



### Makah Fisheries Internship Students



# Coastal Habitats Sea Star Wasting Syndrome



Web: Pacific Rocky Intertidal Monitoring: Trends and Synthesis

### Citizen Science

# Monitoring with NOAA's 2012 National Shoreline Survey Field Guide

- > 20 survey sites
- Monthly surveys
- Sanctuary & Strait
- Building on 3 year history of debris monitoring
- Tracking types of debris and seasonal trends.



- 1. Seafloor Mapping: 4 projects
  - a. Cape Alava Final Report is complete
  - b. Mosquito Creek Final Report is *pending staff time*
  - c. Quillayute Needles Final Report is *pending* additional sonar work in 2014
  - d. The Prairie Final Report is in *final review by* co-author at OSU, then published on OCNMS & PaCOOS websites

2. Oceanography: Data processing is *pending staff time* 

3. Wildlife Research: No UAS reports will be

produced.



- 4. Coastal Habitats: 3 projects
  - a. UAS test for marine debris: No reports will be made.
  - Intertidal monitoring: Data will be processed and sent to MARINe and ONP <u>pending</u> the arrival of a Hollings Scholar for summer internship with OCNMS
  - *c. Sea Sta<mark>r Wasting:* Data <u>have been sent</u>to PRIM</mark>

#### 5. Citizen Science:

Reported regularly to online federal database.



